

DEPARTMENT 10



SECTION A-26 4-H & FFA ENGINEERING



C. Level 3:

1. Troubleshooting—Poster or display on troubleshooting an engine, how the problem was identified, and how it was fixed.
2. Starting a Business—Display or poster on the research done in consideration of starting a small engine business.

CLASS 6 — ROCKETRY

A. Beginning:

1. Exhibit a single-stage rocket (simple tube design) and completed project book.
2. Exhibit a single-stage rocket (more advanced design) and completed project book.

B. Advanced:

1. Exhibit a basic multi-stage rocket and completed project book.
2. Exhibit a more advanced multi-stage rocket and completed project book.

CLASS 7 — BOTTLE ROCKETRY

A. Ages 8-12:

1. First year: Exhibit bottle rocket and launch record.
2. Second year: Exhibit bottle rocket and poster explaining one of the experiments and your results.

B. Ages 13-18: (Must complete project on one year).

Exhibit bottle rocket and poster explaining one of the experiments and your results.

CLASS 8 — WIND POWER

- A. Year 1: Exhibit a wind-powered boat of your own design. Include a chart of the pros and cons of wind power.
- B. Year 2: Exhibit a poster (14" X 22") on turbines.
- C. Year 3: Display your own turbine. In your exhibit, include information on the effects of pitch on the blades and how it changes the energy produced.

CLASS 9 — ROBOTICS

A. Level 1

1. Module 1 (Marshmallow Catapult)
2. Module 2 (Pneumatic Arm)
3. Module 3 (Gripper)

B. Level 2

1. Module 1 (Clipmobile)
2. Module 2 (Can Can Robot)
3. Module 3 (Es Car Go Vehicle)

C. Level 3

1. Module 1,2 (Wall Following Robot)
2. Module 3 (Design and Build A Robot)

CLASS 10 — TRACTOR SAFETY

- A. Task sheets and poster showing activities done.

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SECTION A-26 4-H & FFA ENGINEERING



CLASS 11 — WOOD WORKING

- A. Large finished item
- B. Small finished item
(A poster may be submitted in place of an item too valuable to be left at fair)

CLASS 12 — AEROSPACE

- A. Poster

CLASS 13 — WATER PROJECT

- A. Poster

CLASS 14 — ROCKETS TO THE RESCUE

- A. Poster

CLASS 15 — WELDING

- A. Year 1
- B. Year 2
- C. Year 3
- D. Year 4



SECTION A-27 4-H AND FFA ENTOMOLOGY



Premiums \$3 \$2 \$1

CLASS 1 — ENTOMOLOGY

- A. Year 1-25 different insects representing 5 insect orders.
- B. Year 2-50 different insects representing 7 insect orders.
- C. Year 3-70 different insects representing 9 insect orders.
- D. Year 4-90 different insects representing 10 insect orders.
- E. Creepy Crawlers—Exhibit a poster, display or model
- F. Pest Patrol—Exhibit a poster

CLASS 2 — National Youth Science Day

- A. Poster
- B. Picture Story

CLASS 3 — Embryology

- A. Poster
- B. Picture Story

CLASS 4 — Animal Science

- A. Create a poster or Display on a scientific topic about your species.



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SECTION A-28 4-H & FFA VETERINARY SCIENCE



Premiums \$3 \$2 \$1

CLASS 1—Exhibit a poster or display on one of the titles below

- A. Level 1—Airedales to Zebras poster titles.
 1. Year 1—Roles of the animal of your choice.
 2. Year 2—(Diagrams) of the life stages of one or two animals.
 3. Year 3—Common diseases an animal.
- B. Level 2—All Systems Go poster titles
 1. Year 1—A disease and its effect on various body systems.
 2. Year 2—The importance of colostrum for newborn animals.
 3. Year 3—A vaccination and parasite control program for one species, including diseases and parasites the treatments are intended to prevent
- C. Level 3—On the Cutting Edge poster titles
 1. Year 1—Reproductive tracts and cycles of a species of your choice.
 2. Year 2—Genetic diseases and hereditary conditions of a species and their effects.
 3. Year 3—Careers in veterinary medicine



SECTION A-29 4-H AND FFA SMALL ANIMALS



CLASS 1

Premiums \$3 \$2 \$1

- A. Pet Care - Exhibit a poster as per Roundup Book
- B. Cat:
 1. Year 1— Poster
 2. Year 2— Poster
 3. Year 3— Poster
 4. Item Made: Such as grooming or first aid kit.
- C. Dog:
 1. Poster
 2. Picture Story
 3. Item Made: Such as grooming or first aid kit.
- D. Herpetology
 1. Scrapbook
- E. Cavy— Guinea Pig
 1. Poster
 2. Scrapbook
 3. Item Made: Such as grooming or first aid kit.
- F. Pocket Pets
 1. Poster
 2. Scrapbook
 3. Item Made: Such as grooming, hammock or First aid kit.

DEPARTMENT 10

For more information about Department 10
Please contact the Tioga County Penn State Extension
4-H Office

118 Main Street
Wellsboro, PA 16901

(570)724-9120

Come Support 4-H in Tioga County

4-H SILENT AUCTION

Items available for viewing and bidding in the 4-H
Building from Tuesday 8/8/17 to Friday 8/11/17
Bidding closes at 7 p.m. on Friday 8/11/17

**All items should be picked up at that time unless
otherwise arranged**

All proceeds benefit Tioga County 4-H Education
Award

**Contact the 4-H Office for Information about how
you can donate to the 4-H Silent Auction!
(570) 724-9120**



*Waupaca Foundry Donates to Tioga 4-H at
the 2016 Tioga County Fair*